REMARKS

Claims 1-12 are pending in the present application and are rejected.

Claim Rejections - 35 U.S.C. §103

Claims 1-10 are rejected under 35 U.S.C. §103(a) as being unpatentable over Fujino et al. (US 5623296) in view of Breton et al. (US 5484475) and Burr et al. (EP 0739957 A1).

The Examiner asserts that Fujino et al. differs from the claim of the present invention in that (1) the ink includes at least one sugar alcohol containing not less than four OH groups, which selected from D-sorbitol and maltitol in an amount of 0.5 to 50% by weight. (2) The ink including a compound expressed by the chemical formula R-O-$(CH_2CH_2O)_n$-H, wherein R is an alkyl group having a carbon number of 25 to 150 and n is from 2 to 100, and having HLB not less than 10 and an amount from 0.1 to 8% by weight. The Examiner concludes that it would have been obvious to modify the ink composition of Fujino et al. by the teaching of Breton et al. in order to have a rapid drying ink and high quality print. The Examiner further concludes that it would have been obvious to modify the ink composition of Fujino et al. by the aforementioned teaching of Burr et al. in order to have a high quality printed image.

Claims 11-12 are rejected under 35 U.S.C. §103(a) as being unpatentable over Fujino et al. in view of Breton et al. and Burr et al. as applied to claims 1-10 above, and further in view of Hale et al. (US 645009).

The Examiner asserts that Fujino et al., Breton et al. and Burr et al. discloses all except that the sublimation dye is pulverized into fine particles and has an average particle size of 0.05 to 0.2 micrometer. The Examiner concludes that it would have been obvious to modify the ink composition of Fujino et al. by the aforementioned teaching of Hale et al. in order to have a high quality printed image.

Applicants respectfully disagree with the above rejection, because the cited references would not be combined as asserted, and even if combined, the combination would not yield the present invention.

Applicants note that Fujino et al. disclose a recording method in which the entire solid agglomerate of ink including a colorant and a thermoplastic resin is transferred to a recording sheet. This method can use a non-sublimation colorant such as a water-soluble dye and a pigment, and this is distinguished from the sublimation transfer method for sublimating a sublimation dye. Therefore, the ink of Fujino et al. differs clearly from that of the present invention in both ink composition and printing method, so that Fujino et al. cannot be used as a primary reference.

In view of the above, Applicants note the difference between the present invention and each of the references and argue that there is not motivation to combine these references, and even if they are combined, the ink of the present invention is not obtained. Applicants submit that although the references are individually discussed, they are not individually argued in proscription of Manual of Patent Examining Procedure (MPEP) §2145(IV).

The conventional sublimation transfer dyeing method requires heating for a predetermined time at temperatures higher than the sublimation point of the sublimation dye. Therefore, particularly for a high-boiling organic solvent such as glycerin, the temperature of the solvent is reduced to its condensation point shortly after the evaporated solvent is released into the atmosphere, thus causing smoky steam. This is undesirable because the appearance becomes worse. One possibility for avoiding such a problem is to use a solvent having a low-boiling point that does not cause any smoky steam. However, the solvent having a low boiling point is released easily into the atmosphere. In either case, therefore, environmental pollution (e.g., working environment) is a problem. See page 2, lines 5-17 of the specification.

To solve the above problems of a conventional ink for ink jet recording that includes a sublimation dye, and object of the present invention is to provide an ink for ink jet recording that not only can reduce environmental pollution and maintain required performances such as storage stability and high-quality recording images, but also can effectively prevent nozzle clogging, exhibit good dispersion stability, and achieve a high redispersion property that ensures stable ejection both during long continuous operation and after stopping the operation of an apparatus for a long time. See page 4, lines 11-20 of the specification.

According to the present invention, the sublimation dye is dispersed using the dispersant, and the sugar alcohol containing not less than four OH groups is included as a humectant in the ink having the chemical formula (I), thereby making the amount of water-soluble organic solvent as small as possible to achieve an environmentally oriented sublimation dye ink. See page 6, lines 20-24 of the specification.

Claim 1 of Fujino et al. recites "an intermediate transfer ink jet recording method comprising the steps of ejecting an ink composition comprising water, a thermoplastic resin, a colorant and a water-soluble organic solvent on an intermediate transfer medium to form an ink image; heating said ink image to a heated state at or above the softening or melting temperature of said thermoplastic resin; and transferring said ink image in the heated state on said transfer medium to a recording medium.

Applicants note that the ink of Fujino et al. used in the above recording method is characterized by containing a thermoplastic resin. In its examples, those that do not contain a thermoplastic resin correspond to comparative examples (see Comparative examples 2, 5, 10, 14, and 16).

Furthermore, in the recording method of Fujino et al., the Examiner asserts that the intermediate transfer medium is a sheet medium. However, the intermediate transfer medium of Fujino et al. is not a sheet medium; the intermediate transfer medium of Fujino et al. is a cylindrical transfer drum 1, as shown in FIG. 1, etc. Furthermore, the term "transfer" refers to transferring an entire solid agglomerate of the ink image containing a thermoplastic resin and a colorant to a recording medium. More specifically, when the transfer drum comes into contact with the recording medium, the agglomerate is transferred to the recording medium in a short period of time. Thus, a non-sublimation colorant such as a water-soluble dye and a pigment can be used, and hence, the recording method of Fujino et al. is different from the sublimation transfer method for sublimating a sublimation dye by heating for a predetermined time.

More specifically, according to the recording method of Fujino et al.,

(1) an ink composition is ejected on an intermediate transfer medium to form an ink image, and

(2) the ink image is heated to a heated state at or above the softening or melting temperature of the thermoplastic resin, whereby a solvent is evaporated from the ink image 8, and finally, an agglomerate consisting essentially of solid components is formed on a transfer drum 1. The, the agglomerate becomes an ink image 8a in a film form having a substantially homogeneous thickness as shown in FIG. 3(b), and the surface thereof is viscous in the heated state (see col. 4, line 54 - col. 5, line 4).

Subsequently, the ink image 8a in the heated state is carried to a region facing the pressure roller 3 with the rotation of the transfer drum 1, and then transferred to the recording medium 4, which is a cylindrical transfer drum 1. At this time, one interface of the ink image 8a is wholly peeled off from the surface of the transfer drum 1 whereas the other interface of the ink image is wholly adhered to the recording medium 4. Thus, the ink image 8a is peeled and adhered at its interface, so that the untransferred remaining image can be effectively prevented. The presence of the layer 9 of the organic solvent is advantageous for peeling. (See col. 5, lines 12-34, and FIG. 4).

The Examiner determines that the ink of Fujino et al. does not substantially include a water-soluble organic solvent. However, it is described that the water-soluble organic solvent contained in the ink of Fujino et al. forms the layer 9 (peeling layer) of the water-soluble organic solvent between the ink image 8a and the transfer drum 1 with forming the ink image 8a, which is advantageous (see col. 5, lines 5-11), and as described above, it is also described that the

presence of the layer 9 of the organic solvent is advantageous (for peeling) (see col. 5, lines 28-30). Applicants note that the only examples that do not contain the water-soluble organic solvent correspond to comparative examples (see Comparative Examples 8 and 9). Accordingly, the ink of Fujino et al. substantially includes a water-soluble organic solvent.

Furthermore, the Examiner determines that the ink of Fujino et al. include sugar alcohol. However, as described in col. 5, lines 35-49 that the cohesive force of an ink image is increased by using an ink composition (containing a thermoplastic resin) further including a saccharide, the saccharide included in the ink of Fujino et al. is used together with the thermoplastic resin for the purpose of increasing the cohesive force of the ink image. Then, it is also described that these saccharides are used in the ink in such an amount that the content ratio of the saccharide to the thermoplastic resin is in the range of from 1:4 to 4:1. (see col. 15, lines 56-58). There would be no suggestion to use such a saccharide without a corresponding thermoplastic resin.

Furthermore, in col. 15, lines 49-55, specific examples of the saccharide are described, and "sugar alcohol" is also described as one example among them. However, there is no specific example thereof, and as described above, the purpose of using the saccharide is to increase the cohesive force of the ink image. Even if the saccharide were suggested, the particular sugar alcohol would not be so suggested.

In Examples 37, 38, and 39, α-cyclodextrin, sucrose, and starch are used as the examples of use of the saccharide; however, they do not correspond to sugar alcohol as used in the present invention. Furthermore, the water-soluble organic solvent is used in an amount of 9 wt%, which is not particularly small than those of the other examples. In Fujino et al., a saccharide is merely

added, and hence, it is not described that the amount of the water-soluble organic solvent is made as small as possible by adding the saccharide. Thus, it is not described that the amount of the water-soluble organic solvent is made as small as possible by using the sugar alcohol.

With respect to the sublimation dye limitation, the Examiner determines the colorant of Fujino et al. to be a sublimation dye. However, as the colorant included in the ink of Fujino et al., a water-soluble dye, a disperse dye, a water-soluble dye (when kneaded with a thermoplastic resin), and a pigment are described, and a number of non-sublimation colorants such as a water-soluble dye and a pigment are described. Thus, it is described that assorted colorants can be used. Furthermore, although examples of the disperse dye are also described, they are general disperse dyes, and it is not described that a sublimation dye is particularly selected to be used. The water-insoluble dye is also described; however, it is kneaded with the thermoplastic resin, which exhibits that the water-insoluble dye is transferred together with the thermoplastic resin (see col. 11, line 50 – col. 13, line 45). Thus, it is not described that a sublimation dye is particularly selected as the colorant.

Accordingly, the ink of Fujino et al. differs clearly from that of the present invention in both ink composition and printing method, so that Fujino et al. cannot be used as a primary reference.

Applicants note that Breton et al. (US 5,484,475) disclose an ink composition including water, a colorant, an organic component miscible with water, and micelles that contain an ethoxylated alcohol. Among the components of the ink composition of the present invention,

Breton teaches water and the compound of the chemical formula (I). Claims 1, 2 and 20 of Breton et al. recite as follows:

1. An ink composition consisting essentially of water, a colorant, an organic component miscible with water, and micelles which comprise an ethoxylated alcohol (including a compound expressed by the chemical formula (I) of the present application).

2. An ink composition according to claim 1, wherein the colorant is a water soluble dye.

20. A process for preparing an aqueous ink composition which comprises (a) admixing an ethoxylated alcohol with a water-miscible organic liquid at a temperature at or above the melting point of the ethoxylated alcohol to prepare a saturated solution of the ethoxylated alcohol in the organic liquid; (b) cooling the solution thus formed, thereby obtaining a solid solution with a melting point of from about 30°C to about 80°C; (c) admixing the saturated solution thus prepared with a mixture containing water and a water soluble dye at a temperature equal to or higher than the melting point of the ethoxylated alcohol solution, thereby resulting in an ink composition containing micelles which comprise the ethoxylated alcohol.

Although various dyes and pigments may be used as the colorant in Breton et al., all of the specific examples of the dyes are water-soluble dyes, and no sublimation dye is disclosed (see column 5, line 66 to column 7, line 42). Examiner asserts that the "hot melt ink" is a sublimation dye. However, the hot melt ink indicated by the Examiner uses DIRECT BLUE 199, which is a kind of the water-soluble dyes, as described in Examples IV, V and VI. This dye is not a sublimation dye, and other Examples also use DIRECT BLUE 199. These Examples of

Breton et al. disclose use of the water-soluble dye only, and thus Breton et al. fail to disclose a sublimation dye.

As the organic component miscible with water, glycols such as butyl carbitol are disclosed and used to dissolve the compound of the chemical formula (I) (see column 8, lines 12-36). Breton et al. do not refer to any problem in using the water-soluble organic solvents. Moreover, unlike the present invention, Breton et al. neither disclose nor suggest an environmentally oriented sublimation dye ink while reducing the content of the water-soluble organic solvent as much as possible.

Breton et al. describe several examples including a water-soluble resin as other additives. However, they are used to increase the viscosity, and no dispersant is disclosed, except for the ethoxylated alcohol (see column 8, lines 37-18). Applicants note that for a sublimation dye, coarse particles should be pulverized into fine particles. However, even if the pulverization is performed by using only the compound of the chemical formula (I) without any dispersant, the resultant particles are not sufficiently fine, as disclosed in Comparative Example 4 of the present invention. Thus, it is not possible to produce a stable dispersion type ink.

Accordingly, Breton et al. do not disclose or suggest that an ink composition having a high redispersion property is obtained by adding the compound of the chemical formula (I) to a dispersion in which the sublimation dye is dispersed to form fine particles in the aqueous medium with a dispersant, and that the sugar alcohol containing not less than four OH groups is used as a humectant to reduce the content of the water-soluble organic solvent as much as possible and provide an environmentally oriented sublimation dye ink.

Claims 1, 2 and 4 of Burr et al. (EP 0739957 A1) recite as follows:

1. An ink jet ink comprising a liquid vehicle, 1 to 20% by weight of a binder which is soluble in the liquid vehicle, a colorant which is soluble in the liquid vehicle and a surfactant comprising at least 95% of phosphatidylcholine or lysophosphatidylcholine, and the said surfactant being present in an amount such as provide from 0.05 to 1.0% phosphatidylcholine or lysophosphatidylcholine or mixtures thereof, which is soluble in the liquid vehicle, the binder being selected from the group consisting of a sugar, a sugar alcohol and a mixture thereof.

2. An ink jet ink as claimed in claim 1 which the liquid vehicle is a blend of a lower alkanol and water in a weight ratio of 25/75 to 90/10.

4. An ink jet ink as claimed in claim 1, 2 or 3 in which the sugar alcohol is sorbitol or maltitol.

Although Burr et al. disclose an ink jet ink that uses a sugar alcohol as a binder, the ink is merely a dissolution-type ink including the colorant as a coloring material that is soluble in the liquid vehicle, a special ampholytic surface active agent, and the sugar alcohol as a binder that is soluble in the liquid vehicle. Therefore, the ink of Burr et al. is substantially chemically different from the ink of the present invention in which the sublimation dye that is difficult to be solved in water is dispersed in an aqueous medium with a dispersant. Burr et al. describe "it was decided to use soluble dyes rather than pigments to avoid blockage problems in the ink jet printer" (see page 13, line 20). Moreover, 'when the dyes were used in full ink formulations it was found unexpectedly that greater amounts of colorants could be brought into solution and held stable

therein in the presence of the sorbitol" (see page 14, lines 13-14). As is evident from these descriptions, sorbitol improves the solubility of dyes in the dissolution type ink including the colorant that is soluble in the liquid vehicle. However, Burr et al. do not teach the effect of sorbitol used in a dispersion type ink including a pigment, but rather Burr et al. refers to the blockage problems that may arise in the dispersion type ink (see page 13, line 20). This teaching completely contradicts the present invention. Upon using the sublimation dye of the present invention, if the dye was dissolved, it would not be dispersed uniformly to cause aggregation or precipitation, and thus could not be used as an ink.

Burr et al. do not disclose or suggest that a sugar alcohol containing not less than four OH groups may be used as a humectant in an aqueous dispersion type ink, in which the sublimation dye that is difficult to be solved in water is dispersed to form fine particles in the aqueous medium with a dispersant.

The ink of the present invention also includes the compound expressed by the chemical formula (I). However, Burr et al. do not disclose or suggest that in ink composition having a high redispersion property is obtained by adding the compound of the chemical formula (I) to dispersion in which the sublimation dye is dispersed to form fine particles in the aqueous medium with a dispersant, and that the sugar alcohol containing not less than four OH groups is used as a humectant to reduce the content of the water-soluble organic solvent as much as possible and provide an environmentally oriented sublimation dye ink.

Applicants note that Hale et al. (US 6,450,098) describes an ink composition containing water, 0.2 to 12% by weight of a sublimation dye, and 0.1 to 20% by weight of an anionic

surfactant, and describes a sublimation transfer dying method which includes performing ink jet printing with respect to a sheet medium using the above-mentioned ink for sublimation transfer ink jet recording, and heating the sheet medium to sublimate and transfer the sublimation dye onto an object to be dyed. Hale et al. also describes that the sublimation dye is finely pulverized to fine particles having an average particle diameter (0.2 μm or less) in a range of 0.05 to 0.2 μm (col. 5, lines 10-25; col. 10, lines 65-67; and col. 11, lines 1-5).

However, Examples 2-4 describe the content of each component of a liquid ink, and describe an ink containing, as a humectant, 4.5% by weight of dipropylene glycol (Example 2), 9.5% by weight of diethylene glycol (Example 3), or 3.5% by weight of dipropylene glycol (Example 4). These humectants are water-soluble organic solvents, and diethylene glycol corresponds to the water-soluble organic solvent used in Comparative Example 2 of the present invention. More specifically, Hale et al. does not describe the idea of providing an environmentally-oriented liquid ink composition by minimizing the use of the water-soluble organic solvent, which is the object of the present invention, and the means for achieving the idea. Accordingly, Hale et al. neither describes nor suggests providing an environmentally-oriented sublimation dye ink composition containing a smallest possible amount of water-soluble organic agent by including "sugar alcohol containing not less than four OH groups" as a humectant.

With respect to the rejection of claims 1-10 under 35 U.S.C. §103, Applicants recall that the present invention solves the problems of a conventional ink for ink jet recording using a sublimation dye, and provides an ink for ink jet recording, which not only can reduce

environmental pollution and maintain required performances such as storage stability and high-quality recording images, but also can effectively prevent nozzle clogging, exhibit good dispersion stability, and achieve a high redispersion property that ensures stable ejection both during long continuous operation and after stopping the operation of an apparatus for a long time and a sublimation transfer dyeing method using this ink. More specifically, an environmentally-oriented sublimation dye ink containing a smallest possible amount of a water-soluble organic agent has been put into practical use, by including sugar alcohol containing not less than four OH groups as a humectant in an ink in which a sublimation dye is dispersed with water and a dispersant.

As described above, in the recording method of Fujino et al., the entire solid agglomerate of ink including a colorant and a thermoplastic resin is transferred to a recording sheet. This method can use a non-sublimation colorant such as a water-soluble dye and a pigment, and thus is distinguished from the sublimation transfer method for sublimating a sublimation dye.

As noted by Applicants hereinabove, the ink Fujino et al. used in the above recording method is characterized by including a thermoplastic resin.

Furthermore, it is described that a saccharide is used for the ink of Fujino et al. The purpose of using the saccharide is to increase the cohesive force of an ink image to a recording medium when heated due to the use of the saccharide together with the thermoplastic resin. Furthermore, specific examples of the saccharide are described, and "sugar alcohol" is also described as one example among them. However, there is no specific example thereof. Furthermore, in Examples 37, 38, and 39, α-cyclodextrin sucrose, and starch are used as the

examples of the saccharide; however, the water-soluble organic solvent is used in an amount of 9 wt%, which is not particularly smaller than those of the other examples. In Fujino et al., a saccharide is merely added, and hence, it is not described that the amount of the water-soluble organic solvent can be made as small as possible by adding the saccharide. Furthermore, these saccharides do not correspond to sugar alcohol.

Furthermore, as the colorant, a number of non-sublimation colorants such as a water-soluble dye and a pigment are described, and a disperse dye is also described. However, it is not described that a sublimation dye is particularly selected to be used.

Accordingly, Fujino et al. neither describes nor suggests the object of the present invention: "the sublimation dye is dispersed using the dispersant, and the sugar alcohol containing not less than four OH groups in included as a humectant in the ink having the chemical formula (I), thereby making the amount of water-soluble organic solvent as small as possible to achieve an environmentally oriented sublimation dye ink".

As described above, Breton et al. disclose an ink composition including water, a colorant, an organic component miscible with water, and micelles that contain an ethoxylated alcohol. Among the components of the ink composition of the present invention, Breton teaches water and the compound of the chemical formula (I). However, all the specific examples of the dyes are water-soluble dyes, and no sublimation dye is disclosed. Breton et al. do not refer to any problem in using the water-soluble organic solvents. Moreover, Breton et al. neither disclose nor suggest an environmentally oriented sublimation dye ink while reducing the content of the water-soluble organic solvent as much as possible.

For the sublimation dye, coarse particles should be pulverized into fine particles. However, even if the pulverization is performed by using only the compound of the chemical formula (I) without any dispersant, the resultant particles are not sufficiently fine, as disclosed in Comparative Example 4 of the present invention. Thus, it is not possible to produce a stable dispersion type ink.

Accordingly, Breton et al. do not disclose or suggest that an ink composition having a high redispersion property is obtained by adding the compound of the chemical formula (I) to a dispersion in which the sublimation dye is dispersed to form fine particles in the aqueous medium with a dispersant, and that the sugar alcohol containing not less than four OH groups is used as a humectant to reduce the content of the water-soluble organic solvent as much as possible and provide an environmentally oriented sublimation dye ink.

With respect to claims 1-8 since Breton et al. fail to disclose a sublimation dye, there is no motivation to combine Breton et al. and Fujino et al. Even if the ink composition of Fujino et al. is modified by the above disclosure of Breton et al., such a combination merely results in an ink that includes a water-soluble dye. Thus, it is neither possible to provide an ink composition having a high redispersion property that is obtained by adding the compound of the chemical formula (I) to a dispersion in which the sublimation dye is dispersed to form fine particles in the aqueous medium with a dispersant, nor to provide an environmentally oriented sublimation dye ink that is obtained by using the sugar alcohol containing not less than four OH groups to reduce the content of the water-soluble organic solvent as much as possible.

Furthermore, Burr et al. merely shows a dissolution-type ink using a colorant which is soluble in a liquid vehicle as a coloring material, and a sugar alcohol as a binder which is soluble in a liquid vehicle. Still further, Burr et al. neither describes nor suggests that sugar alcohol containing not less than four OH groups can be applied as a humectant to an aqueous dispersion type ink in which a sublimation dye difficult-to-be soluble in water is finely pulverized with an anionic surfactant.

Therefore, there is no motivation to combine Burr et al. and Fujino et al. Even if the ink composition of Fujino et al. is modified by the above disclosure of Burr et al., such a combination merely results in a dissolution-type ink that includes a water-soluble dye and uses a sugar alcohol as a binder. Thus, it is neither possible to provide an ink composition having a high redispersion property that is obtained by adding the compound of the chemical formula (I) to a dispersion in which the sublimation dye is dispersed to form fine particles in the aqueous medium with a dispersant, nor to provide an environmentally oriented sublimation dye ink that is obtained by using the sugar alcohol containing not less than four OH groups to reduce the content of the water-soluble organic solvent as much as possible.

With respect to claim 9, Applicants admits Fujino et al. may refer to an ink that does not include a water-soluble organic solvent as a comparative example, but do not disclose that the water-soluble organic solvent can be reduced as much as possible by adding the saccharides. Therefore, it is clear that Fujino et al. disclose only the use of the water-soluble organic solvent.

With respect to claim 10, as described above, the recording method of Fujino et al. transfers the entire solid agglomerate of ink including a colorant and a thermoplastic resin to a

recording sheet, and thus is distinguished from the sublimation transfer dyeing method for sublimating and transferring a sublimation dye onto an object to be dyed. Therefore, there is no motivation to combine Burr et al. and Breton et al. with Fujino et al. Even if the ink composition of Fujino et al. is modified by the inventions of Burr et al. and Breton et al., such a combination neither discloses nor suggests the sublimation transfer dyeing method of the present invention.

Thus, claims 1-10 of the present invention cannot be derived easily from the references, even if the ink composition of Fujino et al. is modified by the inventions of Burr et al. and Breton et al.

Rejection of Claims 11-12 under 35 U.S.C. §103(a)

As described above, even if the ink composition of Fujino et al. is modified by the inventions of Burr et al. and Breton et al., it is neither possible to provide an ink composition having a high redispersion property that is obtained by adding the compound of the chemical formula (I) to a dispersion in which the sublimation dye is dispersed to form fine particles in the aqueous medium with a dispersant, nor to provide an environmentally oriented sublimation dye ink that is obtained by using the sugar alcohol containing not less than four OH groups to reduce the content of the water-soluble organic solvent as much as possible.

Thus the method of claim 11 also is not suggested from Fujino et al. in view of Burr et al. and Breton et al.

As described above, the recording method of Fujino et al. transfers the entire solid agglomerate of ink including a colorant and a thermoplastic resin to a recording sheet, and thus is

distinguished from the sublimation transfer dyeing method for sublimating and transferring a sublimation dye onto an object to be dyed.

The recording method of Hale et al. is a sublimation transfer dying method in which a sheet medium is heated to sublimate and transfer a sublimation dye onto an object to be dyed. Furthermore, Hale et al. neither describes nor suggests providing and environmentally-oriented sublimation dye ink composition containing a smallest possible amount of a water-soluble organic agent by including "sugar alcohol containing not less than four OH groups" as a humectant.

Therefore, the invention of Hale et al. and the invention of Fujino et al. relate to different recording methods, and there is no motivation to combine them. Thus, claims 11-12 of the present inventions cannot be derived easily from Fujino et al. in view of Breton et al. and Burr et al, and further Hale et al.

In view of the aforementioned amendments and accompanying remarks, Applicants submit that that the claims, as herein amended, are in condition for allowance. Applicants request such action at an early date.

If the Examiner believes that this application is not now in condition for allowance, the Examiner is requested to contact Applicants' undersigned attorney to arrange for an interview to expedite the disposition of this case.

If this paper is not timely filed, Applicants respectfully petition for an appropriate extension of time. The fees for such an extension or any other fees that may be due with respect to this paper may be charged to Deposit Account No. 50-2866.

Respectfully submitted,

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